



## CASE STUDY 4: PROTECTION COORDINATION STUDY

**Client:** Intercontinental Exchange  
**Industry:** Financial Services  
**Plant Type:** Data Center  
**Project:** Protection Study  
**Contract:** Lump Sum  
**Date:** 2016

“A protection coordination study for a large 30MW data center with an extensive 11kV distribution network and Hybrid Rotary UPS system.”

SPE Electrical was contracted by a **Confidential Client** to review the protection settings of an existing large, 30MW, data centre for a sensitive financial services network.

SPE’s scope was to review the existing system configuration and protection settings, and to import the legacy SKM power system model into the ETAP simulation package. Once complete SPE then analyzed all of the potential operating scenarios and fault currents before developing protection settings for the system.

SPE recognized that these type of protection studies are of key importance to critical infrastructure projects, and spent a significant amount of time with the Client to understand the systems operation and configuration, so that every conceivable operating condition and failure mode was considered. This resulted in SPE producing over 20 Time Current Curves, and a detailed technical report that was over 50 pages in length.

The plant consisted of two incoming 33/11kV utility connections, a large redundant 11kV cable distribution system, extensive standby generation and a complex system of Hybrid Rotary UPSs to supply the data halls.

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